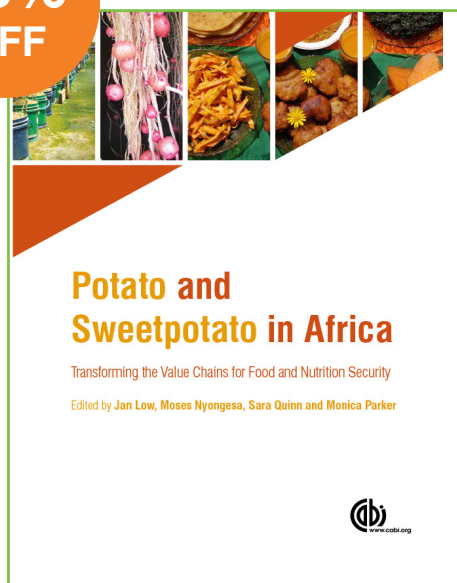


# forthcoming from CABI

20%  
OFF



## Potato and Sweetpotato in Africa

### Transforming the Value Chains for Food and Nutrition Security

Edited by **Jan Low**, International Potato Center, Kenya, **Moses Nyongesa**, Kenya Agricultural and Livestock Research Organization, **Sara Quinn** and **Monica Parker**, both International Potato Center, Kenya

**A comprehensive examination of the fastest expanding food crops in sub-Saharan Africa**

Potato and sweetpotato are two of the most important crop plants in the world, and of increasing prominence in sub-Saharan Africa. Expanding faster than any other food crops in the region, demand has never been higher, and their value as nutritious, short-duration crops to fill gaps in cereal supply is increasingly being recognized.

Capturing the recent advances made in tackling the bottlenecks facing potato and sweetpotato value chains, this book reviews six main themes. It begins with recent advances in breeding, before addressing potato and sweetpotato seed systems, disease and crop management, and innovations in marketing, processing and value chain management. Concluding by comprehensively reviewing the literature on nutritional value and product acceptance, it forms a complete reference on recent research concerning potato and sweetpotato in Africa for researchers of agricultural economics, international development and tropical agriculture. Also covering policies for germplasm exchange, food security and trade, this book provides a valuable resource for private sector companies and public sector actors looking to invest in the crops.

To order a copy at a **20% discount** enter the code **CCPSA20** at the online checkout [www.cabi.org/bookshop/book/9781780644202](http://www.cabi.org/bookshop/book/9781780644202)

**October 2015 / c.584 pages / Hardback / 9781780644202 / £125 / \$240/ €165**

[sales@cabi.org](mailto:sales@cabi.org)

**KNOWLEDGE FOR LIFE**

### **Part I. Advances in Sweetpotato and Potato Breeding**

1. Advances in Sweetpotato Breeding from 1992 to 2012
2. Breeding Sweetpotato for Yield and Beta-carotene Content in Burkina Faso
3. Development of Dual-purpose Sweetpotato Varieties through Participatory Breeding in Rwanda
4. Development and Evaluation of New Sweetpotato Varieties through Farmer Participatory Breeding for High Altitudes in Kenya
5. *In Vitro* Evaluation of Orange-fleshed Sweetpotato Genotypes for Drought Tolerance Using Polyethylene Glycol
6. Ex Ante Evaluation of Improved Potato Varieties for Sub-Saharan Africa
7. Durable Cisgenic Resistance to *Phytophthora infestans* in Potato, and Perspectives for Applications in Africa
8. Exhibition Trial and Farmer Participatory Selection of New Late-blight Resistant B3C1 Potato Genotypes for Adaptation to Nigerian Conditions
9. Integrative Breeding Strategy for Making Climate-smart Potato Varieties for Sub-Saharan Africa
10. New Elite Potato Clones with Heat Tolerance, Late Blight and Virus Resistance to Address Climate Change

### **Part II. Getting Seed Potato Systems Moving**

11. Strategies to Improve Seed Potato Quality and Supply in Sub-Saharan Africa: Experience from Interventions in Five Countries
12. Public-Private Partnership Supporting Women-driven Seed Potato Multiplication in the Lumwana Catchment Area of North-Western Province of Zambia
13. Risk of Uncontrolled Importation of Seed Potato from Europe to East and Central Africa: What are the Policy Options?
14. Quality Seed Potato Production: Experiences From the Highlands of Ethiopia
15. A Possible Pathway for Developing Formal Seed Potato Production in Sub-Saharan Africa: A Case of Uganda National Seed Potato Producers' Association (UNSPPA)
16. Potato Yield Variation as Affected by Virus Seed Degeneration and Growth Conditions in Tunisia
17. Seed Potato Certification in Kenya: Prospects, Achievements and Constraints
18. Adaptation and Improvement of the Seed-plot Technique in Smallholder Potato Production
19. Integration of *In Vitro* Techniques in Informal Seed Production Systems of Potato in Africa
20. Comparison Between Fluorescent Lamps and Light-emitting Diodes on *In Vitro* Growth of Potato Microplants and Subsequent *In Vivo* Performance and Minituber Production
21. An Analysis of Demand, Supply and Elasticities of Seed Potato in Major Producing Areas in Nigeria
22. An Alternative Technology for Pre-basic Seed Potato Production – Sand Hydroponics
23. Improving Seed Health and Seed Performance by Positive Selection in Three Kenyan Potato Varieties
24. Scaling Up the Adoption of Positive Selection and Seed-plot Techniques in Seed Potato Systems in Uganda – UNSPPA's Experience
25. Substrate and Genotype Effects on Growth for Seed Potato (*Solanum tuberosum* L.) Production in Malawi
26. Work of Multiple Organizations to Improve Seed Potato Health in the USA and an Example of Change to Reduce Potato Virus Y in Seed Potato Lots
27. Potato Virus Y in South Africa: Isolate Characterization and Assessment of Potato Cultivar Resistance

### **Part III. Addressing Bottlenecks in the Sweetpotato Seed Systems**

28. Can Small Still Be Beautiful? Moving Local Sweetpotato Seed Systems to Scale in Sub-Saharan Africa
29. Effect of Long-term *In Vitro* Subculturing on Quality Degeneration of Sweetpotato Varieties: Morpho-anatomic

Assessment and Simple Sequence Repeat (SSR) Analysis

30. Shortage of Sweetpotato Planting Material Caused by Prolonged Dry Seasons in Uganda: Strategies to Increase its Availability in Uganda

31. E valuation and Promotion of Sustainable Seed Supply Systems for Vegetatively Propagated Crops in Central and Eastern Kenya

### **Part IV. Tackling Disease and Crop Management in Potato and Sweetpotato**

32. Disease Management, Especially Viruses in Potato and Sweetpotato
33. Insect Life Cycle Modelling (ilcym) Software – a Generic Platform for Developing Insect Phenology Models, Population Analysis and Risk Mapping
34. *Phytophthora infestans* Population Changes in Kenya Pose Challenges to Existing Potato Blight Control Strategies
35. Root Knot Nematodes and Soft Rot Enterobacteriaceae, Two Emerging Problems of Potatoes
36. Can Mineral Oil Protect Seed Potato Against Aphid Transmission of Potato Virus Y?
37. The Farming Systems of Potential Potato Production Areas of Chencha, Southern Ethiopia
38. Aphids Infesting Potato in Kenya
39. Maize-Orange-fleshed Sweetpotato Intercropping: Potential for Use to Enhance Food Security and Scaling-up the Nutrition Effort in Malawi
40. Effect of Staking on Flower Induction, Pollination and Cross-compatibility Among Sweetpotato
41. Sweetpotato and Garden Egg Intercrop Compatibility Studies in Umudike, Nigeria
42. Nutrient Uptake and Yield Efficiency of Exotic Sweetpotato Cultivars Under Organic Soil Management System in Abeokuta, Southwestern Nigeria

### **Part V. Innovations in Marketing, Processing Technologies and Value Chain Management for Potato and Sweetpotato**

43. On the Road to Potato Processing in African Tropical Highlands
44. Unlocking the Potential of the Potato Subsector in Kenya – a Roadmap for Revitalizing the Subsector
45. Potential of Processing Potato Flakes from Popular Kenyan Potato Varieties
46. Assessing Potato Production Efficiency through Contract Farming in Kenya: The Case of Bomet and Molo Farmers
47. Improvement of Processing Technology Research and Utilization of Sweetpotato and its Derived Foods in China and Rwanda
48. Building a Sustainable Sweetpotato Value Chain: Experience from the Rwanda Sweetpotato Super Foods Project
49. Sweetpotato Value Chain Development in West Africa: Matching Products with Farmer Typology
50. Vacuum-frying Processing Technology Improves Quality Attributes of Fried Sweetpotato Chips
51. Price Integration of Sweetpotato Marketing: Implications for an Efficient Marketing System in Nigeria
52. Transaction Costs and Agricultural Household Supply: Response of Sweetpotato Farmers in Kwara State of Nigeria
53. Promotion of Vitamin A-enriched Sweetpotato for Production by Small-scale Commercial Farmers in South Africa
54. Getting the Equation Right: Engendering Sweetpotato Value Chains in East Africa

### **Part VI. Evidence on Nutritional Value, Product Acceptance and Changing Behaviours Concerning Sweetpotato**

55. Assessing Nutritional Value and Changing Behaviours Regarding Orange-fleshed Sweetpotato Use in Sub-Saharan Africa
56. Effect of Sweetpotato Meal and Composite Sweetpotato-meal-based Diets on Performance of Weaner Rabbits
57. Determining Availability of Nutrients in Sweetpotato Grown in the Kenyan Highlands Using *In Sacco* Degradability and *In Vitro* Digestibility
58. Sweetpotato-based Formulation: An Alternative Food Blend for Complementary Feeding
59. Evaluation of Sensory Quality Characteristics of Muffins Developed from Sweetpotato Flours

[www.cabi.org/bookshop/book/9781780644202](http://www.cabi.org/bookshop/book/9781780644202)

**Marston Book Services Ltd.**, 160 Milton Park,  
Abingdon, Oxfordshire OX14 4SD, UK  
T: +44 (0)1235 465577 F: +44 (0)1235 465555  
E: [direct.orders@marston.co.uk](mailto:direct.orders@marston.co.uk)

**KNOWLEDGE FOR LIFE**